

CLAIMS

What is claimed is:

1. A method disrupting access to radio-frequency signals emanating from the perimeter of a wireless network deployment, comprising
 - detecting the strength of at least one internal radio frequency signal associated with the wireless network deployment emanating from the perimeter; and
 - transmitting an overlay signal in a direction substantially orthogonal to the perimeter, wherein the power of the overlay signal is greater than the detected strength of the at least one radio frequency signal.
2. The method of claim 1 wherein the perimeter is defined at least in part by a wall.
3. The method of claim 2 wherein the wall is an outer wall of a building.
4. The method of claim 1 wherein the overlay signal comprises at least one wireless network protocol frame.
5. The method of claim 4 wherein the wireless network protocol frame is an 802.11 frame.
6. The method of claim 1 further comprising dynamically adjusting the overlay signal in response to detected changes in the radio frequency signals emanating from the perimeter.

7. The method of claim 1 further comprising

dynamically adjusting the power of the overlay signal in response to detected changes in the signal strength of the at least one internal radio frequency signal.

8. The method of claim 1 further comprising

coordinating the transmission of the overlay signal with the transmission of internal radio frequency signals within the perimeter.

9. The method of claim 1 wherein the transmitting step comprises transmitting the overlay signal on a selected set of operating channels.

9. The method of claim 1 further comprising dynamically adjusting the overlay signal in response to detected changes in the radio frequency signals emanating from the perimeter.

10. The method of claim 1 further comprising verifying that the detected RF signals emanates from the wireless network environment.

11. The method of claim 10 wherein the verifying step comprises comparing protocol information from the detected RF signals to known protocol information associated with the wireless network environment.

12. The method of claim 11 wherein the known protocol information comprises at least one instance of any of the following: a MAC address, a link layer address, a network layer address, a service set identifier.

13. A method disrupting access to radio-frequency signals emanating from the perimeter of a wireless network deployment, comprising

detecting the strength of at least one radio frequency signal associated with the wireless network deployment emanating from the perimeter;

locating a radio transmitter at a desired location proximal to the perimeter, wherein the radio transmitter is operative to an overlay signal in a direction substantially orthogonal to the perimeter, wherein the power of the overlay signal is greater than the detected strength of the at least one radio frequency signal.

14. An apparatus disrupting access to radio-frequency signals resulting from operation of a wireless network, comprising

an RF signal detector operative to

detect RF signals resulting from operation of a wireless network;

determine the strength of the RF signals;

an overlay signal transmitter operative to transmit overlay signals, wherein the transmit power of the overlay signals is dynamically adjusted in response to the strength of the RF signals detected by the RF signal detector.

15. The apparatus of claim 14 further comprising a first antenna operably connected to the RF signal detector.

16. The apparatus of claim 15 further comprising a second antenna operably connected to the overlay signal transmitter.

17. The apparatus of claim 16 wherein the first and second antennas are directional antennas, and wherein the peak gains of the first and second antennas are arranged in opposing relation.

18. The apparatus of claim 14 wherein the overlay signals comprise at least one wireless network protocol frame.

19. The apparatus of claim 18 wherein the wireless network protocol frame is an 802.11 frame.
20. The apparatus of claim 14 wherein the overlay signal transmitter is operative to transmit overlay signals on a selected set of wireless network operating channels.
21. The apparatus of claim 14 wherein the overlay signal transmitter is operative to transmit overlay signals in response to signals detected by the RF signal detector.
22. The apparatus of claim 14 wherein the RF signal detector is operative to compare network protocol information embodied in the detected RF signals against a matching information to verify that the wireless network environment is the source of the wireless signal.
23. The apparatus of claim 22 wherein the matching information includes at least one instance of any of the following: a MAC address, a link layer address, a service set identifier.
24. A method disrupting access to radio-frequency signals emanating from the perimeter of a wireless network deployment, comprising
 - detecting the strength of at least one internal radio frequency signal associated with the wireless network deployment emanating from the perimeter; and
 - transmitting an overlay signal substantially external to the perimeter, wherein the power of the overlay signal is greater than the detected strength of the at least one radio frequency signal.

25. A wireless network system disrupting access to radio-frequency signals resulting from operation of the wireless network system, comprising

- a plurality of access elements for wireless communication with at least one remote client element and for communication with a central control element;
- a central control element for supervising said access elements, wherein the central control element is operative to manage wireless connections between the access elements and corresponding remote client elements,
- wherein the access elements are each operative to
- establish and maintain, in an access point mode, wireless connections with remote client elements; and
- an overlay transmitter operably connected to the central control element; wherein the overlay transmitter is operative to transmit an overlay signal; and wherein the central control element is operative to configure the overlay transmitter with one or more operational parameters.

26. The system of claim 25 wherein the central control element is operative to configure the overlay transmitter to coordinate transmission of overlay signals with the operation of at least one of the plurality of access elements.

27. The system of claim 25 wherein the overlay transmitter is an access element operative to switch between an access point mode and an overlay transmitter mode in response to control signals transmitted by the central control element.